

Annual Report on the Spalding Rural District for the year 1906.

To The Rural District Council
Gentlemen

The number of Deaths registered in the whole District was 145, and the death-rate 11.06 per thousand. This is the lowest number of deaths since 1899 when the number was 143.

It is 17.9 below the average number of deaths for the District and the death-rate is 1.9 below the average for the last ten years.

The deaths were distributed as follows:

Pinchbeck 32 Gosberton 40 Donington 29
Moulton 32 and Littleworth 12.

All these numbers are below the average except Gosberton which is 5.8 above it.

Pinchbeck is 10.5 ~~below~~ and Moulton 9.7 below the ten years' average.

The ages at death were: under 1 year 24 :

1 to 5 years of age 6 : 15 to 25 years 9 :

25 to 65 years 30 and above 65 years 71 :

The 24 deaths under 1 year of age give a ~~rate~~ death-rate of 67.98 per 1000 births registered. This is the lowest rate for the last ten years, excepting 1904 which had exactly the same rate; it is 21.41 below the average rate per 1000 births.

This is a distinct advance and shews that parents are more careful in feeding their infants. I have, however, too often seen people giving infants beer, pastry and other unsuitable things which act as irritant poisons to them, lowering their vitality & rendering them unable to resist the ordinary ailments of infancy. It does not appear to be commonly understood that starchy foods, such as flour & bread, are not

digested by infants.

Of these deaths under 1 year of age $\frac{1}{4}$ were at Pinchbeck (this is the lowest number on record and is 3.7 below the average) 5 at Gosberton, 5 at Donington, 5 at Moulton & 5 at Littleworth.

As regards the ages at death in the District generally, I would specially note the fact that 50 per cent. of the deaths were of people above the age of 65 years.

Of these 25 were above the age of 80, or in other words more than 17 per cent. of those who died in the District last year had lived over 80 years.

Indeed, if we leave out of the calculation those under 5 years of age (who may be said not to have had a fair start), we find that over 21 per cent. lived 80 years and upwards. One man, at Pinchbeck, died at the age of 93.

Excluding the deaths of children of 5 years of age and under, the average age at death was 63.125 years (63 years, one and a half months).

In the different districts, with the same reckoning, the average ages at death were: Pinchbeck 65.1 : Gosberton 63.2 : Donington 64.1 : Moulton 66.3 and Littleworth 37.5. There were however only six deaths in Littleworth above 5 years of age and two of these were from infectious disease.

The average age at death is very high, and the expectation of life in ~~place~~ Pinchbeck and Moulton is more than ten years above the average for England and Wales.

Nothing can speak more strongly for the health of a district than a low death-rate combined with a high average age at death.

The main causes of death were : Senile Decay 23 :
 Cerebral Disease 11 : Bronchitis 10 : Heart Disease 20 :
 Pneumonia 5 : Accident 4 : Suicide 3 : Scarlet Fever 2
 (1 at Moulton and 1 at Littleworth) .

There were 7 deaths from Phthisis , 3 at Pinchbeck and 2 each
 at Moulton and Gosberton. ~~This amounts to 5.5 per cent of~~
~~the total~~ In the District 5.5 per cent of the total deaths were due
 to tuberculous disease , as against 11.3 per cent for England and
 Wales.

Although the arguments against making Phthisis a notifiable
 disease are almost as strong as those for it , nevertheless more
 should be done to prevent the spread of this dangerous infectious
 disease .

I consider that deaths from phthisis should be immediately
 notified to the Sanitary Authority who should have the house
 properly disinfected. Any one who vacates a house , after knowingly
 infecting it with the germs of consumption should be required ,
 under a penalty , to inform the landlord or in-coming tenant .
 Tubercle bacilli remain alive for at least two months in the dust
 of dark rooms .

There were 10 deaths from Cancer , the table for this disease during
 the last five years being :

Pinchbeck	Gosberton	Donington	Moulton	Littleworth
2	5	1	2	0
1	1	3	3	1
0	0	5	0	3
2	2	3	5	1
2	3	2	3	0

This gives 1 death in : 2250 : 1160 : 725 : 1320 : 1407 of
 the population per annum for the last 5 years average.

There were 353 births registered during the year, 27.1 per thousand population. This is an increase of 19.5 over the average number of births for the last 10 years.

In Pinchbeck there were 73 births, in Gosberton 91 (24 above the average), in Donington 62, in Moulton 102 (11.4 above the average) and in Littleworth 25.

The number of notifications of infectious disease was 132 of which 115 were Scarlet Fever: 27 in Pinchbeck:

14 in Gosberton: 2 in Donington: 26 in Moulton & 46 in Deeping S. Nicholas. Two of these cases were fatal, one in Moulton & one in Littleworth.

There were nine cases of Diphtheria all at Gosberton.

Five cases of Erysipelas were notified 2 in Pinchbeck, 2 in Moulton and 1 in Littleworth.

Two cases of Puerperal Fever were notified, one at Donington and one, which was fatal, at Littleworth.

There was one case of Typhoid Fever, at Donington.

I found it necessary to recommend the closing of the following schools for infectious disease:

Urbston S. Mary	Jan. 2 nd to Jan. 18 th
Littleworth	May 4 th to June 11 th
Tongue End	Nov. 1 st to Nov. 28 th

Besides the work connected with infectious disease, I have systematically inspected the District & have found fewer nuisances than formerly.

Of course there is need for more houses for the labouring classes but that need is not so great as it was at one time.

Many new houses have been built, notably at Littleworth.

The cases of over crowding at Donington have been remedied.

There is no systematic water-supply in the District and most of the houses are supplied by soft water cisterns, which fail in dry seasons.

The hard water wells are easily contaminated as are the drains, and water taken from these should be boiled before use. In many parts of the District a regular water supply would be of great benefit to the inhabitants.

There have been complaints of the state of the ~~Rusgate~~ ^{Gosberton} ~~Donington~~ ^{Donington} Eau at ~~Donington~~ ^{Gosberton}; during last summer the water was allowed to get too low & the drain was, at times, very offensive. It has not been cleared out for many years, and this should now be done.

The surface drainage for the roads at ~~Donington~~ ^{Gosberton} requires re-laying. It is used for sewage & this should be put a stop to by the authorities responsible for those drains.

The sewage from the town of Bourne is, at times, insufficiently oxidised and contaminates the Fortyfoot at Puthram. I have communicated with the Commissioners and hope that, during the ensuing summer, there will be no further nuisance.


The whole district is purely agricultural and contains neither factory nor workshop of importance.

There are two steam corn-mills, one at Donington & the other at Moulton & there are two small breweries.

There are 20 carpenters' shops, and the same number of bakehouses; there is no underground bakehouse in the district. In no case is there any overcrowding.

There are no 'common lodging houses' in the district.

The butchers' shops are, on the whole, well kept; ~~and~~ as are also the slaughter houses. In the future, however, the outside premises of the slaughter houses will have to be kept ~~in a greater~~ in a better sanitary state.



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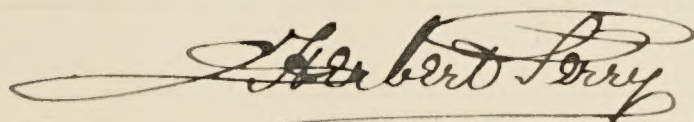
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The cowsheds are mostly well kept, but the new bye laws will cause those who are careless to look after their premises more thoroughly than they have hitherto done.

I am

Gentlemen

Your obedient servant

Herbert Perry

Medical Officer of Health.

[Spalding Free Press, November 26th 1907.]

DEEPING WATER SUPPLY.

Medical Officer's Report to the Spalding Rural Council.

The Medical Officer of Health to the Spalding Rural District Council read the following report on the water supply of Deeping St. Nicholas at last Monday's meeting of the Council:—

Owing to the low average rainfall of less than 25 inches, to long periods of drought, and to the absence of any fresh water river, the Middle Township of Deeping St. Nicholas frequently suffers from scarcity of water for several months during each year.

The cottages are mostly supplied with cisterns, and the inhabitants are almost entirely dependent upon the rainfall. In those years during which the rainfall amounts to 25 inches, this will give a supply of 6,203 gallons to an ordinary cottage covering 500 square feet. From this 25 per cent. must be deducted for evaporation, leaving less than 5,000 gallons for use during the year, or 13½ gallons per cottage daily.

This should suffice, but the difficulty lies in storing it. During a dry season the supply will run short in this district unless something like 2,800 gallons are stored. This would measure 450 cubic feet, and would require a cistern very considerably over 8ft. x 8ft. x 7ft. if the cistern is to be used throughout the year; moreover this amounts to over half the quantity collected, and leaves out of account any wastage whatever. In practice it would be impossible to store this amount during an ordinary year, and in a year like 1887 with a rainfall of under 13 inches, or again in 1890 with 15½ inches, cottagers must of necessity run short of water. In addition to this, cemented cisterns are very liable to burst in the fens because of the changes in pressure which take place during the rise and fall of the sock. Lord Carrington has quite recently been obliged to sink metal cisterns inside of cement ones for this reason.

Hard water wells near houses in this district are practically always contaminated

because of the porous nature of the sub-soil and the great variations in the height of the sock, which frequently rises to within a foot of the surface during the earlier part of the year. I have analysed numerous samples from hard water wells in this district, and only on rare occasions have I found them uncontaminated, and then not from cottage property. Parts of Deeping Fen are supplied by water carried in ditches from the River Glen; this is useful for cattle, but is neither a safe water, nor a safe method of conveying water for human beings.

A boring was made near Littleworth railway station in 1894, and a large supply of water was obtained. This water on being analysed at the time was found to contain a large amount of chlorine (60.52 grains, equivalent to over 100 grains of common salt per gallon), otherwise it was an excellent water, and hopes were expressed at the time that a large proportion of this salt would be washed out and that the water would improve very considerably. I have carefully analysed it recently (October 8th, 1907), and find that the diminution of the chlorine has been barely perceptible during the last 13 years. It now amounts to 60.2 grains per gallon. In other ways the water is even better than it was, although the free ammonia remains at .006, the albuminoid ammonia is reduced from .004 to under .001 parts per 100,000, and the nitrates from .008 parts per 100,000 have almost disappeared. The water is beautifully soft, and is very suitable for cooking, and for most household purposes, but contains too much salt for it to be an ideal drinking water. The yield is twenty gallons per minute, and the water is absolutely safe.

This boring has a depth of 350 feet and passes through the Lincolnshire limestone into a sandy clay. Saline water was found at 264 feet, and water was again struck at 286 and at 308 feet, in the Lincolnshire limestone. Seeing that the excellent water at Bourne and also at Tongue End, at Market and St. James' Deeping all come from the Lincolnshire limestone, a mistake must have been made in continuing this bore into the underlying clay. If the water were brackish, as was reported at the time, this would probably have diminished very rapidly. However, water was found at 350 feet, and pipes

have been laid down which carry this water to the Spalding limit of the parish, a distance of about two miles, and many houses besides several farms draw their supplies from it. In the other direction the water is taken as far as, but is not supplied to, the railway station.

Along the road to Deeping are numerous cottages (54 from the station to the "Hop Pole"), the Middle Township Schools, and several large farms. These depend on the rainfall for their water supply. The "Hop Pole," 1½ miles from the present bore, is about the middle of this district and any water supply would have to be brought here, and perhaps a mile and a half further toward Deeping. Considering the unsatisfactory state of the present supply and the distance it would have to be carried, I think it would be highly advisable to discuss the possibility of obtaining a better water closer at hand.

The nearer we approach the outcrop of the Lincolnshire limestone along the inland borders of the Fens, the shallower are the artesian wells that have been sunk, and the greater is the certainty of obtaining a good supply. The water becomes less and less salt, but does increase somewhat in hardness as we approach the higher land. At St. James Deeping it is found at 120 feet, at Market Deeping at 130, and at Baston (on Mr. Peasgood's farm two miles east of the village) at 170 feet. Further from the outcrop it is found at Deeping St. Nicholas at 264 and at 350 feet and is rather salt, whereas at Crowland it was only found at 470 feet, and that water was brackish, containing 153 parts of chlorine per 100,000. At Tongue End an excellent water was found at 183 feet, while further north on Mr. T. Gray's farm by the side of the Glen in West Pinchbeck, a bore was sunk 265 feet without success; another has been started, and is now 165 feet. Again at Dunsby Fen a large supply was found at 176 feet, whereas in Pinchbeck North Fen further from the outcrop the bore had to be sunk 252 feet; at Fosdyke water was not found within 326 feet, and at Boston, still further off, bores were sunk 572 feet without success.

The main point is that the water improves and comes nearer the surface as we approach the higher country. As the Lincoln-

shire limestone was found at Tongue End at 198 feet, at Deeping St. Nicholas at 266 feet, and at Market Deeping at 130 feet, one might reasonably expect to find it at the "Hop Pole" within 240 feet of the surface, and at a mile and a half nearer Deeping within 165 feet, and in all probability it would be found still nearer the surface, as these strata shelve up more rapidly as they approach their outcrop. If there is any idea of carrying pipes to the limit of the parish I would strongly advise boring there, rather than at the "Hop Pole."

A third alternative might be suggested, and that is to lay down pipes from the Tongue End boring to the "Hop Pole," a distance of about three miles. The advantages in so doing are the certainty of obtaining a magnificent drinking water of excellent quality in every way, and also the certainty of being able to decide on the exact outlay required before commencing the work. The Surveyor to the Urban District has kindly drawn up estimates for laying down these pipes: the cost per mile for 3 inch main cast iron pipes three-eighth inch thick, coated with composition throughout, would amount to £274 6s. 8d., and for 4 inch pipes £326 3s. 4d. per mile. It would therefore be very far cheaper to bore.

Although we have been fortunate during recent years in escaping an epidemic of disease due to contaminated water, there is no doubt whatever that a good water supply adds materially to the health of a district, and in connection with this district especially it is interesting to note that "Wens" (a form of actinomycosis) which were formerly common amongst cattle living on the black fen lands have practically disappeared from those farms which are supplied with artesian well water.

In conclusion may I suggest that the Council, after taking these various facts into consideration, do appoint a committee to consider the whole subject, especially as regards the relative expense of the different schemes suggested, and do make a report thereon to your Council,

I am, Gentlemen, Your obedient servant,
S. HERBERT PERRY,
Medical Officer of Health.
November 18th, 1907.

